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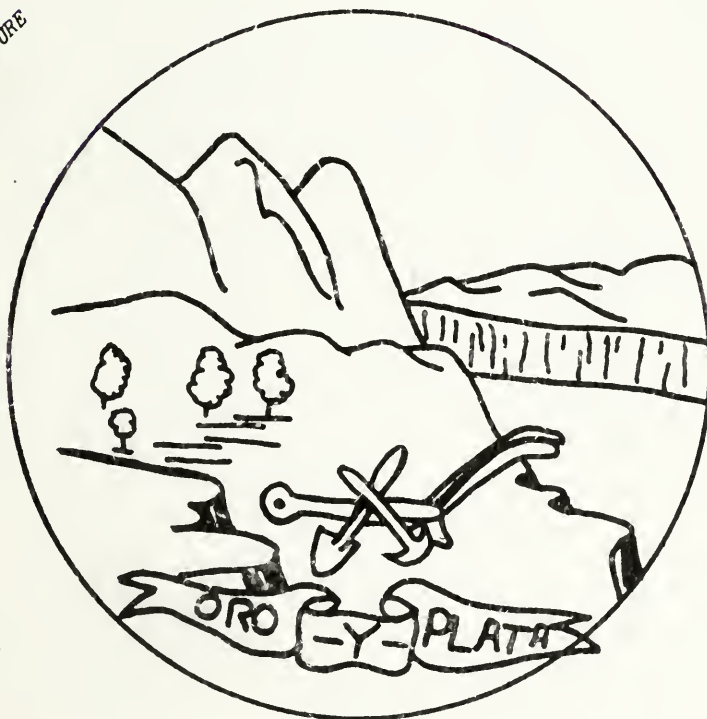
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MONTANA ECONOMIC INDICATORS

AN ANALYSIS OF PAST AND PRESENT
ECONOMIC TRENDS

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MONTANA
ECONOMIC INDICATORS

AN ANALYSIS OF PAST AND PRESENT ECONOMIC TRENDS

MONTANA STATE EMPLOYMENT SERVICE
EMPLOYMENT SECURITY DIVISION
DEPARTMENT OF LABOR AND INDUSTRY

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ACKNOWLEDGEMENTS

Federal Reserve System - 9th Federal District

U. S. Department of Agriculture Statistical
Reporting Service - Helena, Montana

Montana State Library - Historical Documents
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Employment, Hours and Earnings, and Labor
Turnover data produced in cooperation with
the Bureau of Labor Statistics and the
Manpower Administration.

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METHODOLOGY and INTERPRETATION

Source of Data

Every month, a representative sample of employers throughout Montana who are subject to the unemployment insurance program receive a Department of Labor Form 790, "Monthly Report on Employment, Payroll, and Hours". Since employers are not required by law to complete this form, many of them fail to return. From those employers who do cooperate, however, a sufficient amount of data are obtained to use as a base for computing average weekly hours. The information is summarized and estimates derived upon receipt of the individual reports.

Methodology

Data submitted by the sample establishments are compiled and average weekly hours are obtained by dividing the sum of the total man-hours by the total number of production workers as reported by each establishment. Summarized data for individual industries are then weighted, using the same procedure every month for each industry. Average weekly hours are then sent to the Bureau of Labor Statistics for use in press releases, the "Monthly Labor Review" and other publications. These data are also used as national economic indicators as published by the Department of Commerce.

Data from individual reports are held in strict confidence and may not be released in any manner without written permission from the reporting source. This restriction also applies to other government agencies of any level who are not direct participants in the Labor Turnover Statistics and Current Employment Statistics programs. Both the rights of the reporter and this state agency are protected in this manner.

METHODOLOGY and INTERPRETATION (Cont.)

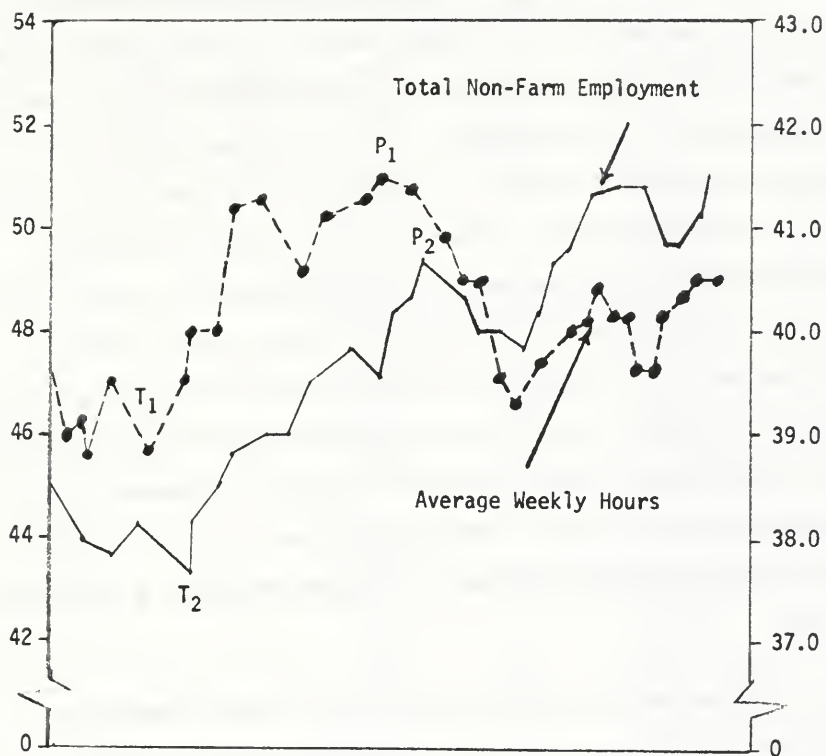
Interpretation*

Changes in average weekly hours are directly related to expansion and contraction fluctuations in business activity. Hours of work in manufacturing are "Leading Indicators" because their changes usually occur prior to any upswing or downswing in the business cycle. The factory work-week is often used as an indicator of the demand for manufacturing workers and, together with other economic indicators, is useful in determining whether labor shortages or surpluses exist.

A downward trend in average weekly hours will usually occur six months prior to the peak of a business cycle, and an upward trend in hours generally occurs three months prior to the trough of a business cycle. In both phases of the business cycle, these changes reflect movements in production patterns and employment levels. In most cases, reduction of hours occurs before management's decision to cut employment. Similarly, hours will tend to increase several months before the rate of accessions increases. This phenomenon is verified by those employers who apparently find it more economical to vary labor input on short notice through overtime than to hire additional workers. In either case, changes in average weekly hours will normally precede employment adjustments in both phases of business activity. Both situations are illustrated in the following hypothetical graph.

* Source : U.S. Department of Labor, "Monthly Labor Review", October 1970.

METHODOLOGY and INTERPRETATION (Cont.)



Note that the peak (P_1) of average weekly hours precedes the peak (P_2) of non-farm employment. Also note that the trough (T_1) of average weekly hours precedes the trough (T_2) of non-farm employment.

ANALYSIS - 1972

Four of Montana's six leading indicators showed negative trends during the first half of 1972 and two of these, average weekly hours and layoffs, plunged to their lowest point in twelve years. The accession rate reached its lowest point in eleven years, and average weekly insured unemployed reached its lowest point in ten years discounting the copper strike in late 1971. On the other hand, the other two leading indicators, building permits and dollar valuation of building permits reached their highest levels since 1965.* Bank debits, a coinciding indicator, also reached the highest level it has ever obtained in Montana. These seemingly contradictory indicators are really not surprising, as they merely reinforce the theory that Montana consumer spending habits have little overall effect on employment activity in Montana's manufacturing industries. This fact is further reinforced in that all the other coinciding indicators, which are basically employment data, show a negative or downward trend.

Data are not complete for the second quarter of 1972; however, preliminary results indicate that the negative trend in employment data will continue.

Montana's employment indicators for the first half of 1972 display a static or negative trend as compared to the more positive trends of the comparable national series.

* Data for these two indicators, prior to 1965, are not available at this time.

ANALYSIS - 1972 (Cont.)

Manufacturing - Average Weekly Hours

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>
U. S.	40.0	40.5	40.4	40.8	40.5
Montana	40.5	40.8	41.9	37.9	37.3

Manufacturing - Accession Rate

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>
U. S.	4.4	4.5	4.5	4.5
Montana	3.7	4.1	3.9	2.8

Unemployment Rate - Seasonally Adjusted

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>
U. S.	5.9	5.7	5.9	5.9	5.9	5.5	
Montana	7.3	7.1	6.8	7.0	7.2	7.2	7.6

It should be noted that the above figures are not a comparison of Montana's limited manufacturing sector with that of the diverse structure of the national manufacturing sector but rather a comparison of trends.

MONTANA LEADING INDICATORS

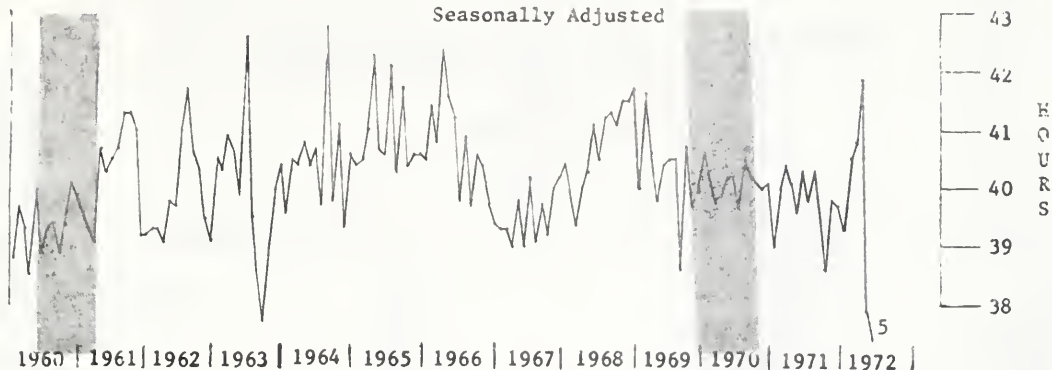
1970 1971 1972

	Manufacturing- Average Weekly Hours		Manufacturing- Total Accessions (Per 100 Employees)		Manufacturing- Layoffs (Per 100 Employees)	
	UNADJUSTED	ADJUSTED	UNADJUSTED	ADJUSTED	UNADJUSTED	ADJUSTED
<u>1970</u>						
January	40.3	40.3	2.5	3.5	1.1	1.0
February	39.4	39.8	2.2	3.2	1.0	1.1
March	39.7	39.9	3.5	4.2	0.5	0.9
April	39.7	40.2	4.8	4.3	2.0	4.0
May	40.2	40.2	6.4	4.5	0.8	1.0
June	39.4	39.7	8.5	4.6	0.9	1.0
July	39.9	40.5	5.3	4.8	1.0	1.5
August	41.2	40.2	4.6	4.5	0.8	0.8
September	40.5	40.1	5.4	4.4	1.5	1.4
October	40.3	40.0	6.5	6.8	1.1	0.8
November	39.9	40.1	2.1	3.7	1.9	1.3
December	39.5	39.0	2.2	3.6	2.0	1.3
<u>1971</u>						
January	40.0	40.0	3.4	4.8	2.4	2.0
February	40.0	40.4	2.1	3.7	1.1	1.2
March	39.9	40.1	5.3	6.4	1.4	2.6
April	39.1	39.6	5.4	4.8	1.1	2.2
May	40.3	40.3	5.0	3.5	0.4	0.5
June	39.5	39.8	7.2	3.9	0.6	0.7
July	39.7	40.3	5.6	5.1	0.8	1.2
August	40.4	39.5	4.4	4.3	1.4	1.3
September	39.0	38.6	4.6	3.7	0.9	0.8
October	40.1	39.8	4.5	4.7	0.8	0.5
November	39.5	39.7	2.1	3.7	1.2	0.8
December	39.9	39.3	2.0	3.3	0.9	0.6
<u>1972</u>						
January	40.5	40.5	2.6	3.7	0.9	0.8
February	40.4	40.8	2.3	4.1	1.1	1.2
March	41.7	41.9	3.2	3.9	2.9	5.5
April	41.1	37.9	3.1	2.8	0.4	0.8
May	40.3	37.3				
June						
July						
August						
September						
October						
November						
December						

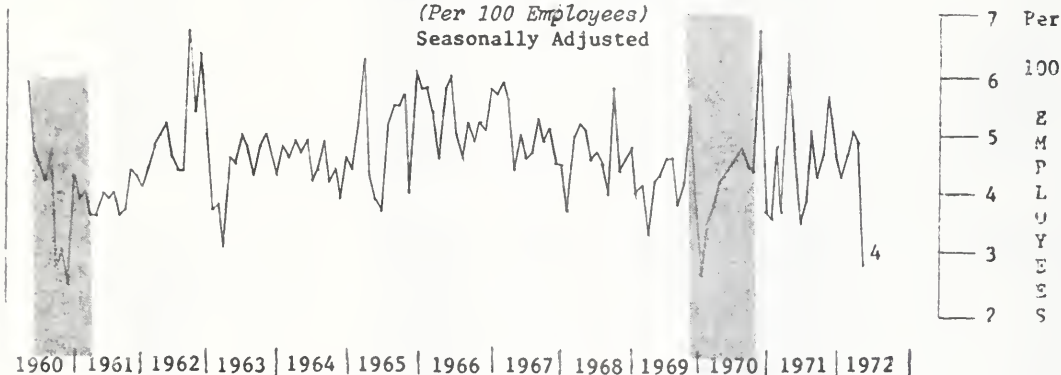
NOTE: Seasonally adjusted data and the use of indexes are provided for statistical analysis only and should not be confused with actual numbers. See Glossary.

MONTANA LEADING INDICATORS

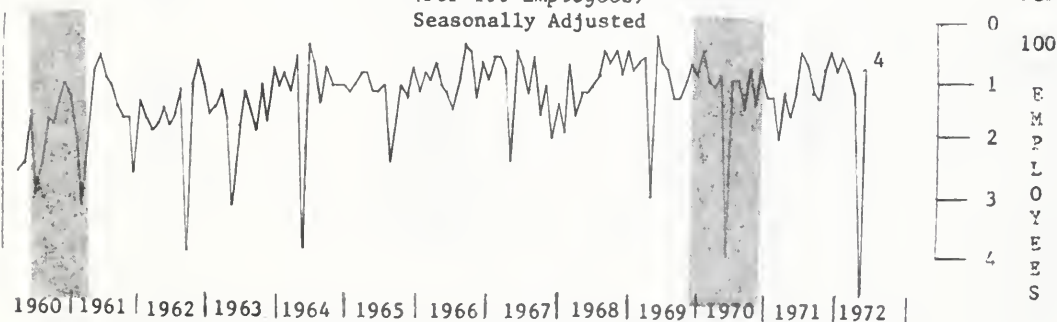
MANUFACTURING - AVERAGE WEEKLY HOURS Seasonally Adjusted



MANUFACTURING - TOTAL ACCESSIONS (Per 100 Employees) Seasonally Adjusted



MANUFACTURING - LAYOFFS (Per 100 Employees) Seasonally Adjusted (Inverted)



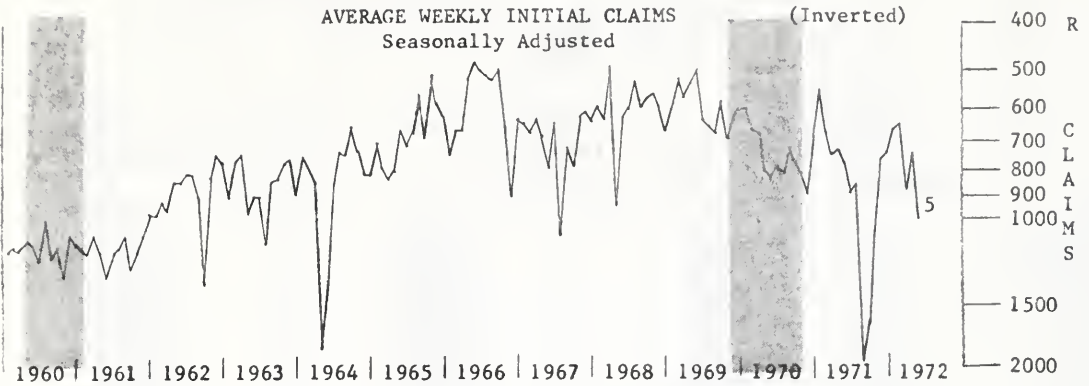
MONTANA LEADING INDICATORS

1970 1971 1972

	Average Weekly Initial Claims	Building Permits	
		Number	Valuation (In 000's)
1970			
January	600	106	\$ 649
February	665	139	2,106
March	677	213	4,178
April	800	249	2,380
May	836	331	4,196
June	790	288	6,760
July	810	332	3,341
August	728	298	7,641
September	772	358	3,785
October	813	335	8,807
November	893	245	4,942
December	686	128	4,117
1971			
January	556	106	\$2,123
February	676	153	1,740
March	741	277	3,742
April	734	443	6,418
May	775	364	8,426
June	899	406	6,162
July	867	382	4,780
August	1,934	410	8,693
September	1,630	357	5,370
October	1,074	387	9,046
November	765	228	4,044
December	737	136	5,243
1972			
January	663	105	\$2,067
February	655	159	2,740
March	876	398	6,531
April	741	514	9,527
May	1,008		
June			
July			
August			
September			
October			
November			
December			

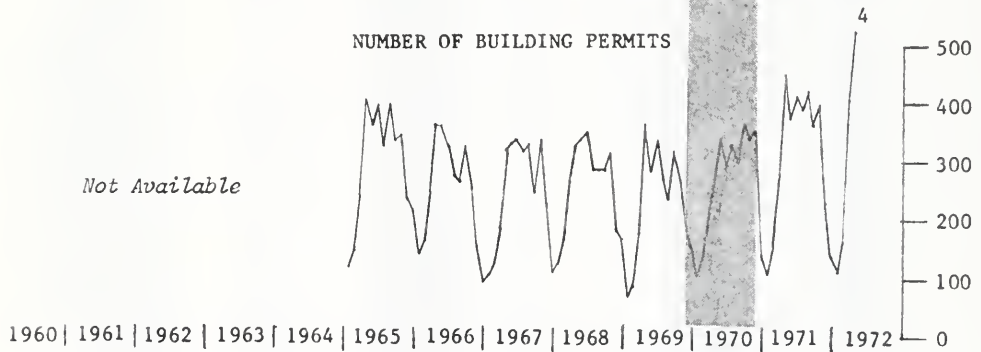
MONTANA LEADING INDICATORS

AVERAGE WEEKLY INITIAL CLAIMS
Seasonally Adjusted (Inverted)



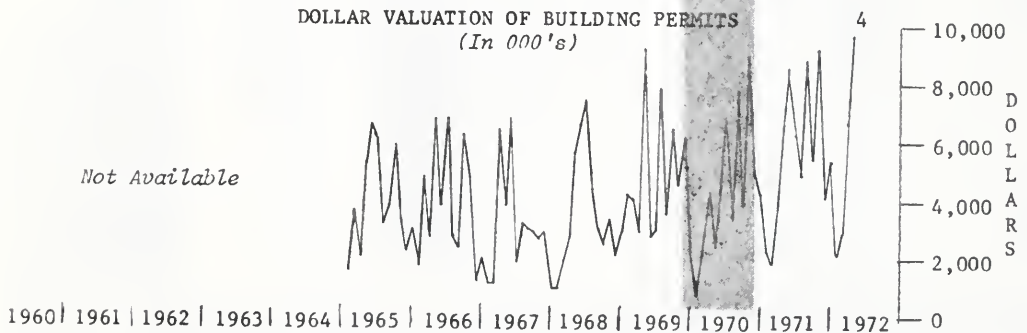
NUMBER OF BUILDING PERMITS

Not Available



DOLLAR VALUATION OF BUILDING PERMITS
(In 000's)

Not Available



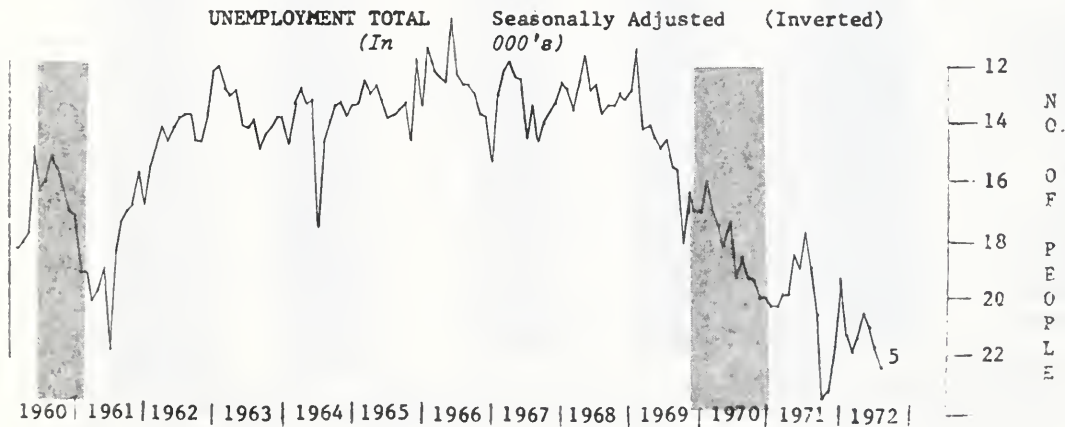
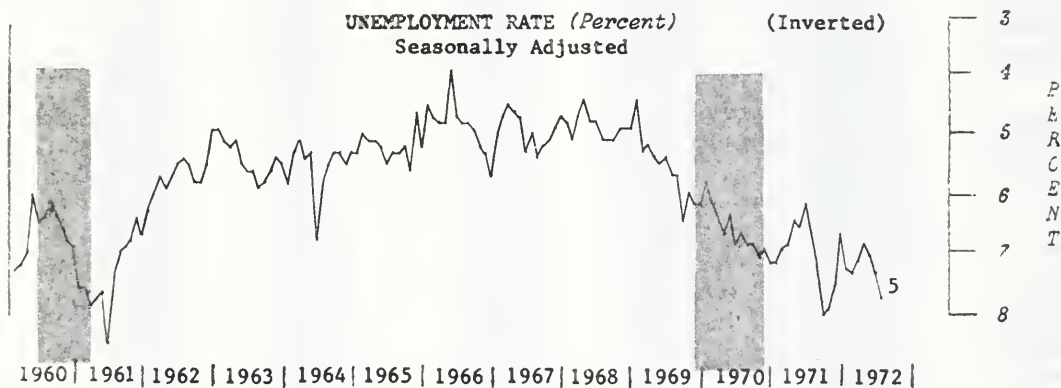
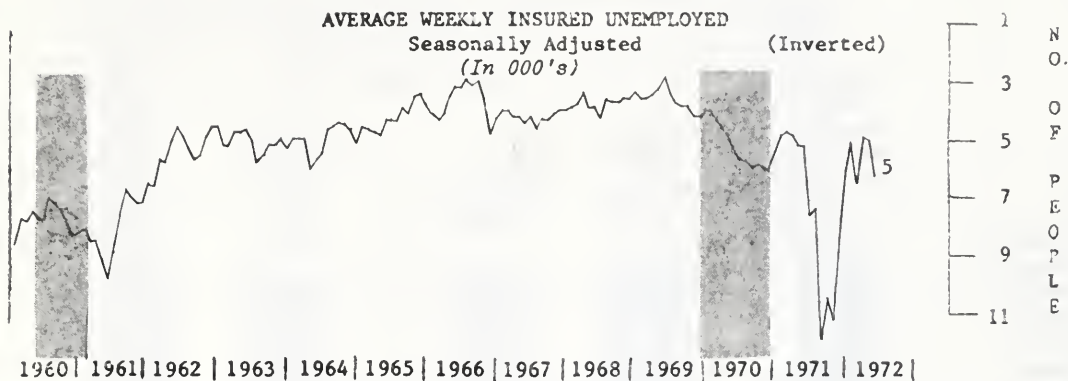
MONTANA COINCIDING INDICATORS

1970 1971 1972

	Average Weekly Insured Unemployed		Unemployment Rate (Percent)		Unemployment Total (In Thousands)	
	UNADJUSTED	ADJUSTED	UNADJUSTED	ADJUSTED	UNADJUSTED	ADJUSTED
1970						
January	7,291	3,950	7.7	3.2	20.2	17.0
February	8,175	4,260	8.3	3.2	21.6	17.5
March	8,021	4,519	8.6	3.2	22.8	18.2
April	6,295	4,869	6.9	3.2	18.6	17.4
May	4,462	5,395	6.5	3.2	18.5	19.3
June	3,165	5,622	7.2	3.2	22.1	18.6
July	3,100	5,720	6.0	3.2	18.5	19.3
August	2,733	5,957	5.1	3.2	15.6	19.4
September	2,347	5,837	5.1	3.2	14.6	20.0
October	2,628	5,986	5.0	3.2	14.1	20.0
November	4,255	6,027	6.7	3.2	19.0	20.3
December	6,639	5,402	7.2	3.2	19.9	20.3
1971						
January	9,033	4,893	8.8	3.2	23.7	19.9
February	9,116	4,750	9.0	3.2	24.5	19.9
March	8,533	4,807	8.4	3.2	23.1	18.5
April	6,636	5,132	7.1	3.2	20.3	19.0
May	4,493	5,226	5.9	3.2	17.1	17.8
June	4,234	7,520	7.2	3.2	22.5	19.0
July	3,978	7,339	6.3	3.2	19.8	19.0
August	5,441	11,830	6.0	3.2	18.9	20.6
September	4,229	10,464	5.8	3.2	16.9	23.5
October	4,888	11,134	5.4	3.2	15.3	23.2
November	5,926	8,394	6.3	3.2	18.2	19.4
December	7,377	6,002	7.3	3.2	20.9	21.3
1972						
January	9,582	5,191	9.3	3.2	26.0	21.9
February	12,320	6,420	9.4	3.2	26.3	21.4
March	8,744	4,926	8.3	3.2	25.6	20.5
April	6,588	5,695	7.6	3.2	22.4	21.0
May	5,197	6,234	6.9	3.2	20.8	21.7
June						
July						
August						
September						
October						
November						
December						

NOTE: Seasonally adjusted data and the use of indexes are provided for statistical analysis only and should not be confused with actual numbers. See Glossary.

MONTANA COINCIDING INDICATORS



MONTANA COINCIDING INDICATORS

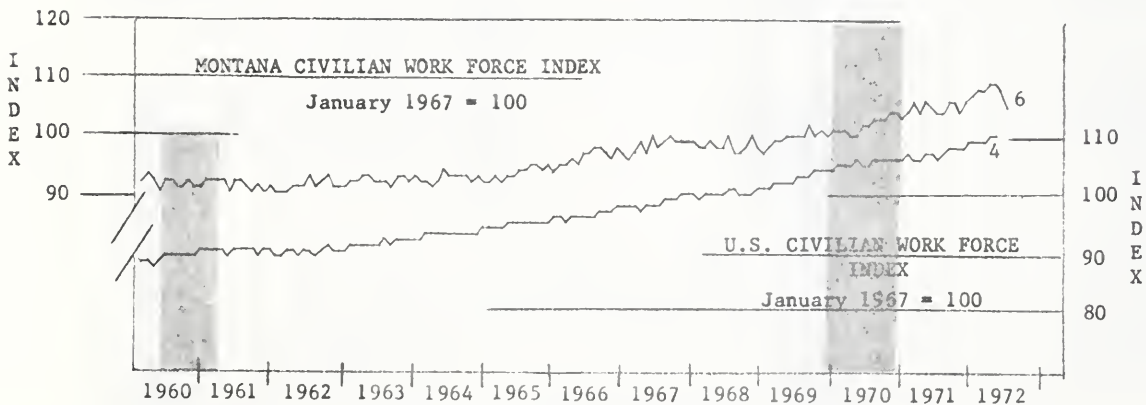
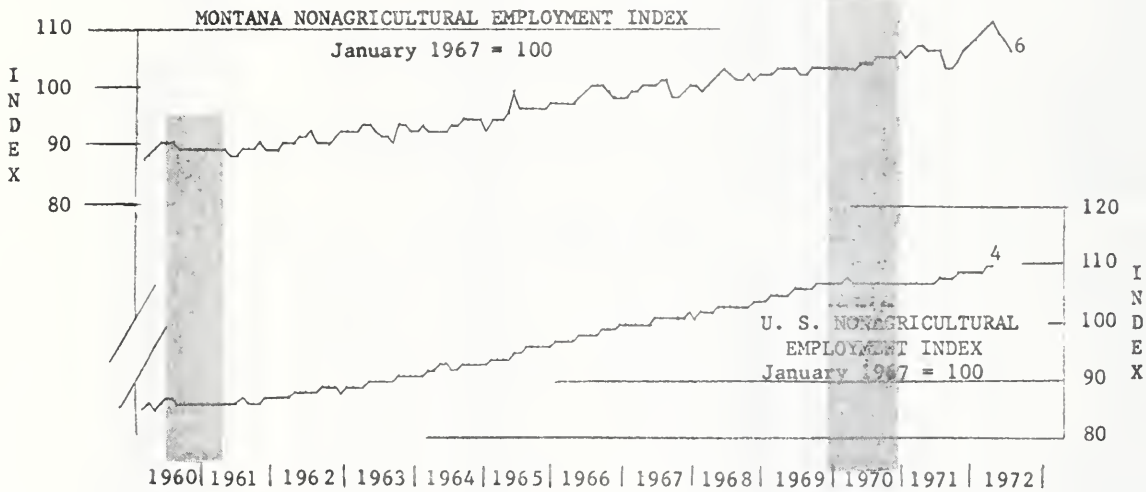
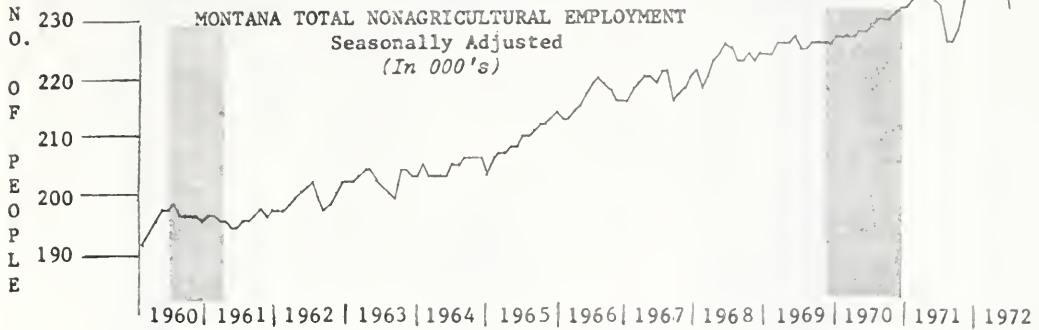
1970 1971 1972

INDEX 1967 = 100

	Montana Total Nonag. Employment Seas. Adj. (In 000's)	Montana Nonag. Employment INDEX	U. S. Nonag. Employment INDEX	Montana Civilian Work Force INDEX	U. S. Civilian Work Force INDEX
1970					
January	228.7	103.7	106.8	102.6	106.1
February	228.4	103.5	106.8	102.3	106.2
March	228.0	103.4	107.0	101.6	106.9
April	229.6	104.1	106.8	101.5	107.0
May	229.5	104.0	106.8	103.5	106.7
June	230.8	104.6	106.1	102.3	106.5
July	231.9	105.1	106.5	104.6	107.0
August	231.7	105.0	106.5	104.8	107.0
September	231.7	105.0	106.5	104.7	107.2
October	232.8	105.5	106.8	105.5	107.6
November	233.8	106.0	106.6	105.3	107.8
December	233.5	105.8	106.4	104.3	107.9
1971					
January	234.4	106.0	106.8	105.6	108.2
February	236.8	107.3	106.6	107.0	107.8
March	237.9	107.8	106.4	106.7	107.9
April	235.4	106.7	106.8	107.2	108.3
May	234.9	106.5	106.9	106.4	108.6
June	233.8	106.0	106.8	105.6	107.8
July	227.1	102.9	107.2	105.9	108.5
August	227.7	103.2	107.5	107.9	109.0
September	229.8	104.2	107.9	107.4	109.2
October	234.8	106.4	108.2	105.4	109.6
November	237.8	107.8	108.6	107.0	110.0
December	238.0	107.9	108.7	108.1	110.2
1972					
January	241.5	109.6	108.1	109.2	110.8
February	243.1	110.2	108.4	109.7	110.6
March	245.1	111.1	109.3	110.1	111.6
April	241.1	109.8	109.7	110.3	111.5
May	239.7	108.7	109.6	109.6	
June	233.2	106.0		106.9	
July					
August					
September					
October					
November					
December					

NOTE: Seasonally adjusted data and the use of indexes are provided for statistical analysis only and should not be confused with actual numbers. See Glossary.

MONTANA COINCIDING INDICATORS



MONTANA
COINCIDING
INDICATOR

MONTANA
SELECTED
INDICATOR

MONTANA
COMPOSITE
INDEX

1970 1971 1972

1970 1971 1972

1970 1971 1972

State
of
Montana
Bank Debits
(In 100,000's)

Total
Nonag.
Placements
(In 000's)

Composite
Index*
4 Leading
Indicators
1967 = 100

1970

January	899,613	1,817	96.2
February	705,711	1,473	92.3
March	799,504	1,784	98.8
April	789,548	2,263	74.6
May	760,630	3,003	92.9
June	827,884	2,938	94.3
July	834,555	3,005	87.2
August	786,338	3,895	102.1
September	844,998	2,619	87.1
October	923,319	2,670	110.9
November	927,122	1,597	81.9
December	989,982	1,175	86.6

Yearly Total 28,239

1971

January	874,117	1,359	92.7
February	770,000	1,736	89.9
March	893,869	1,272	90.0
April	890,783	1,834	83.7
May	821,501	2,966	113.8
June	991,803	2,720	98.6
July	909,923	2,761	91.2
August	895,078	3,810	74.1
September	920,603	2,844	83.8
October	937,181	2,292	113.2
November	1,139,461	2,214	96.6
December	1,160,345	1,678	105.3

Yearly Total 27,486

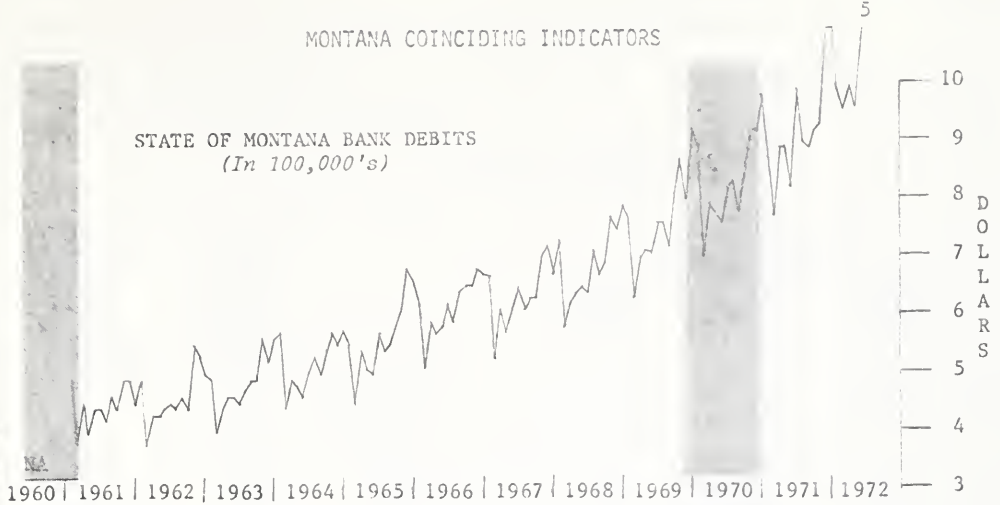
1972

January	1,044,308	1,496	100.6
February	960,966	1,746	93.0
March	1,030,887	2,202	70.0
April	961,949	2,513	91.5
May	1,112,672	3,197	
June			
July			
August			
September			
October			
November			
December			

* See Glossary.

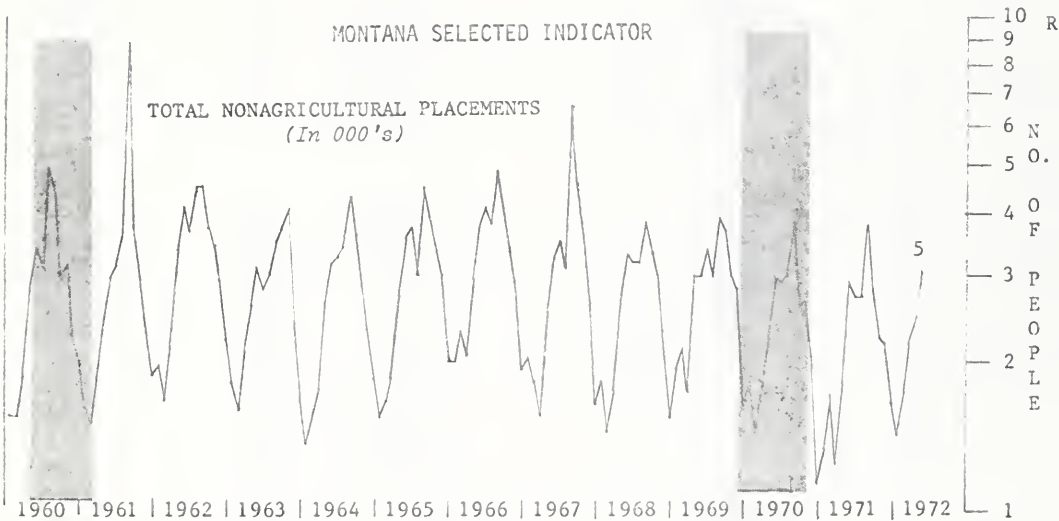
MONTANA COINCIDING INDICATORS

STATE OF MONTANA BANK DEBITS (In 100,000's)

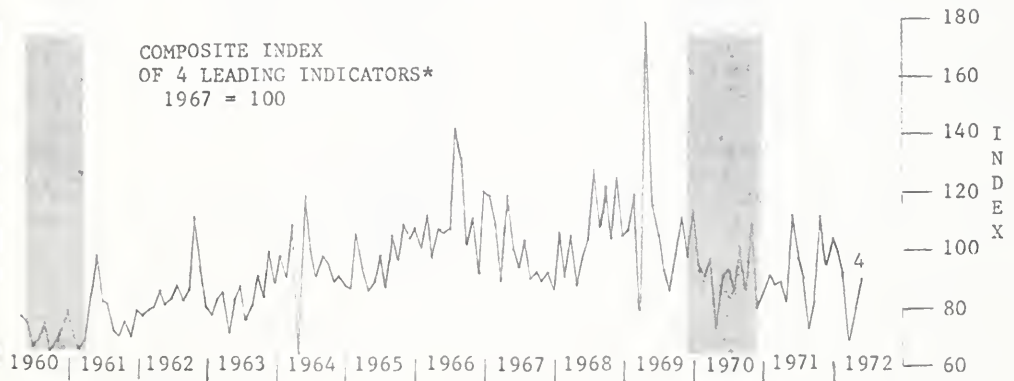


MONTANA SELECTED INDICATOR

TOTAL NONAGRICULTURAL PLACEMENTS (In 000's)



COMPOSITE INDEX OF 4 LEADING INDICATORS* 1967 = 100



* See Glossary.

MONTANA SELECTED INDICATORS

1970 1971 1972

FARM PRICE INDEX (1947-1949=100)					
	Prices Paid	Prices Received	Parity Ratio*	Average Hourly Earnings Mfg. (Dollars)	Employment Lumber & Wood Products (Thousands)
<u>1970</u>				<u>1970</u>	
1st Qtr.	170	101	59	January	8.3
				February	8.0
				March	7.3
2nd Qtr.	169	95	56	April	7.1
				May	7.4
				June	8.2
3rd Qtr.	171	98	57	July	8.6
				August	8.7
				September	8.8
4th Qtr.	174	90	52	October	8.7
				November	8.6
				December	8.5
<u>1971</u>				<u>1971</u>	
1st Qtr.	175	98	56	January	7.7
				February	7.6
				March	8.0
2nd Qtr.	177	95	54	April	7.6
				May	7.9
				June	8.6
3rd Qtr.	180	98	54	July	8.9
				August	9.1
				September	9.2
4th Qtr.	184	97	53	October	9.0
				November	8.9
				December	8.8
<u>1972</u>				<u>1972</u>	
1st Qtr.	188	106	56	January	8.7
				February	8.4
				March	8.2
2nd Qtr.				April	7.8
				May	8.0
				June	
3rd Qtr.				July	
				August	
				September	
4th Qtr.				October	
				November	
				December	

* See Glossary.

MONTANA SELECTED INDICATORS

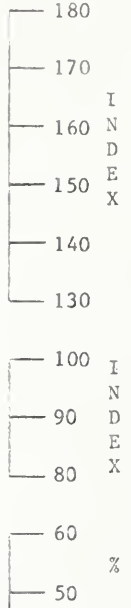
(1947-1949 = 100 Quarterly)

PRICES PAID BY FARMERS - INDEX

PRICES RECEIVED BY FARMERS - INDEX

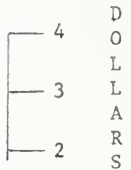
FARMERS PARITY RATIO*

1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972



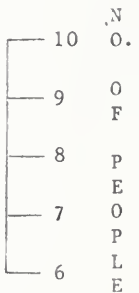
AVERAGE HOURLY EARNINGS - MANUFACTURING
(Dollars)

1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972



EMPLOYMENT - LUMBER & WOOD PRODUCTS
(In Thousands)

1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972



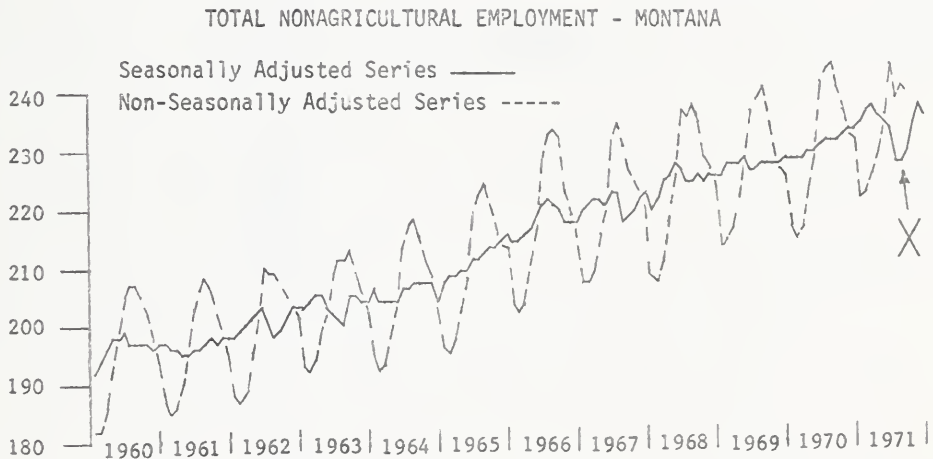
* See Glossary.

APPENDIX I

GLOSSARY

Seasonal Adjustment - A mathematical procedure in which certain monthly or yearly variations such as climate, holidays, vacation practices, etc., are removed from the statistics. The purpose of this is to simplify analysis over a long period of time and to highlight such non-seasonal occurrences as strikes, natural disasters, floods, earthquakes, etc.

Non-Seasonally Adjusted - or "raw" data will not always reflect such occurrences precisely because of seasonal influences. For example, the following chart is a graph of total nonagricultural employment for the State of Montana for the years 1960 to 1971.



Note the erratic nature of the non-adjusted data, and that a non-seasonal phenomena occurred in 1971 directly above the "X" mark. During this period a labor-management dispute occurred and the seasonally adjusted figures emphasize this point whereas the dispute is not readily apparent in the non-adjusted data. A word of caution is due at this point about non-adjusted and adjusted data. Adjusted data is not a "substitute" for actual data, and should in no way be used as such.

Economic Indicators - Statistical time series whose cyclical characteristics are known and fairly stable, particularly in the timing of their cyclical peaks and troughs relative to business cycle turns. Economic indicators are used for the interpretation of current, and the anticipation of prospective, business conditions.

Leading Indicators - An economic series that tends to reverse direction sufficiently in advance of changes in total business activity. The peaks and troughs of this type of indicator generally occur from three to several months previous to the peak or trough in total business activity.

Coincidental Indicators - An economic series that tends to parallel the same general pattern of total business activity.

Selected Indicators - A cyclical time series whose true value as an economic indicator is not yet known.

Lagging Indicators - An economic series that tends to reverse direction (reach its peaks or troughs) some time after the total business pattern has changed.

Other Indicators - A statistical series that combines the cyclical changes of the other types of economic indicators. For example, personal income generally lags at the peaks, and leads at the troughs of total business activity.

Montana Composite Index - An aggregate of four leading indicators. The indicators used are: Manufacturing - Average Weekly Hours, Total Accessions, and Layoffs; and Average Weekly Initial Claims. A reverse trend was used for Layoffs and Average Weekly Initial Claims. This composite index is in no manner or form comparable to the United States composite index as published in "Business Conditions Digest", U.S. Dept. of Commerce. The two indexes do not contain the same data, and the Dept. of Commerce used weighted figures while Montana's index used unweighted figures.

Labor Turnover - The movement of wage and salary workers into and out of employment status.

Accessions - All permanent or temporary additions to the employment rolls, which include new hires and other accessions.

New Hires - Permanent and temporary additions to employment rolls of persons who have never been employed by a specific reporting establishment. This includes former employees who have been rehired although not specifically recalled by the reporting employer.

Other Accessions - Additions to the employment rolls of transfers from other establishments of the same company; employees returning from military service or unpaid leaves of absence; employees specifically recalled by an employer.

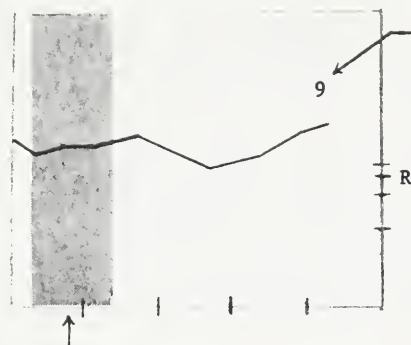
Separations - The termination of employment of persons who quit, are laid off, discharged, retire, die, are inducted into the military for service exceeding 30 consecutive days, suffer physical disabilities, or are transferred to other establishments of the same company.

Quits - The termination of employment initiated by an employee for any reason other than retirement, transfer, or service in the Armed Forces.

Layoffs - Suspension from pay status of an employee, expected to last seven consecutive days. This action must be initiated by the employer without prejudice to the worker, for reasons such as lack of orders, model changeover, termination of seasonal employment, inventory-taking, plant breakdown, technological changeover, shortage of materials.

APPENDIX II

KEY



Arabic numbers above graph lines indicate the last month of the year for which data have been plotted.

"R" indicates that the scale is a ratio (semilogarithmic) scale. All others are arithmetic scales.

Shaded areas on the graph indicate recession periods in the United States as designated by the National Bureau of Economic Research.

Shaded areas on the charts are to differentiate seasonally adjusted data and indexes from non-seasonally adjusted data.

Broken lines on graphs indicate that data is not available for that time period.

Montana's indicators have been classified into three types; Leading, Coinciding, and Selected. The classification of Montana's Leading and Coinciding Indicators parallels the Department of Commerce, Bureau of Economic Analysis classification. This has been done to facilitate an easier and more accurate comparison of individual indicators with those of the nation. (This classification, however, does not mean that the Montana Employment Service has endorsed any particular economic theory.)

Historical data available upon request.

MONTANA ECONOMIC INDICATORS

AN ANALYSIS OF PAST AND PRESENT
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